

REMARKS

After the foregoing amendment, claims 1-8, as amended, are pending in the application. Claims 1-4 have been allowed. Claim 5 has been amended to more to more particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants submit that no new matter has been added to the application by the Amendment.

Rejection - 35 U.S.C. § 102

The Examiner rejected claims 5-8 under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent No. 6813230 (Ko et al.). Applicants have amended claim 5 to more precisely describe the invention. Accordingly, Applicants respectfully traverse the rejection.

Amended claim 5 recites:

An optical disk comprising a track groove including a plurality of positional information units, wherein:
each positional information unit includes a positional information section and a sync mark section,
each positional information section includes a plurality of unit sections,
*each unit section has a wobble pattern selected from a plurality of wobble patterns including a **first wobble pattern having repeated first displacement shapes and a second wobble pattern having repeated second displacement shapes,** and*
each first displacement shape is defined so as to correspond to a signal waveform that rises relatively steeply and falls relatively gently compared with a fundamental waveform, and
each second displacement shape is defined so as to correspond to a signal waveform that rises relatively gently and falls relatively steeply compared with the fundamental waveform.

Amended claim 5 recites a plurality of positional information units 404, each of which includes a positional information section 406 and a sync mark section 407. Each

positional information section 407 includes a plurality of unit sections 408. Each unit section consists of a wobble pattern having a repeated displacement shape, where the repeated displacement shape for each unit section is selected from one of two displacement shapes.

Further, one of the two displacement shapes is a waveform having a steep rise and a gentle fall and the other of the two displacement shapes is a waveform having a gentle rise and a steep fall.

For example, as described in the embodiment at page 98 and Figs. 25, 26A and 26B, each unit section (i.e. subdivided information unit 408) consists of 32 repetitions of the same displacement shape.

Ko et al. is directed to an addressing method using a phase modulated wobble signal. Each sector of a disk includes three physical identification data (PID) units (Fig. 7B) Each PID unit (Fig. 7A) comprises a wobble sync portion having synchronization information, a wobble carrier portion comprising a pure wobble signal, a PID block, which includes the actual address information and which is disclosed as containing phase modulated address information and an error detection code (EDC). In particular, as described at col. 6, lines 4-34, Ko et al. teaches recording positional information as a QPSK signal formed by recording a first BPSK signal on one wall of a track and a second BPSK signal, in quadrature with the first BPSK signal on an adjacent wall of a track..

In order to anticipate a claim under 35 U.S.C. § 102, the reference must teach every element of the claim. MPEP § 2131. "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) and MPEP § 2131.

Applicants submit that Ko et al. does not teach or suggest recording a positional information section as a plurality of unit sections, where each of the unit sections is a wobble pattern having a repeated first displacement shape or a repeated second displacement shape, and where each displacement shape is a waveform having either a steep rise and a gentle fall or a gentle rise and a steep fall, as recited in amended claim 5.

In the first instance, the Examiner has not identified the specific elements of Ko et als. positional recording apparatus which correspond to the positional information unit, positional information section, and unit section recited in claim 5, thereby failing to show in as complete detail as claim 5, that Ko et al. teaches all the elements of claim 5.

Further, assuming, *arguendo*, that the Examiner is equating the PID described by Ko et al. with the claimed positional information section, since each include disk addressing information, Applicants submit that the structure of a PID is different than the structure of a positional information section.

Ko et al. teaches recording positional information in a PID as a conventional phase modulated signal. Nowhere in Ko. et al. is a PID described as including a plurality of unit sections. In fact, Figs 4-6 merely disclose a conventional phase modulated signal having a substantially sinusoidal shape recorded in the track grooves. Accordingly, there is no disclosure of recording positional information using one of two wobble patterns, where each of the wobble patterns is a repeated first displacement shape or a repeated second displacement shape, and where each of the repeated displacement shape is a waveform having either a steep rise and a gentle fall or a gentle rise and a steep fall. Further, while the phase modulated signal shown in Fig. 6 has an occasional phase transition that appears to result in a displacement shape of the wobble pattern that rises steeply and falls gently or rises gently and falls steeply, such phase transitions are not repeated over a unit section as recited in claim 5.

Applicants submit that Ko et al. does not teach or suggest a unit section including a wobble pattern having first or second displacement shapes repeated within a unit section nor does Ko et al. disclose a wobble pattern having a displacement shape which rises gently and falls steeply or rises steeply and falls gently. Accordingly, for all the above reasons, Applicants respectfully request reconsideration and withdrawal of the §102 rejection of claim 5.

In respect to claim 6 and claims 7-8 dependent on claim 6, Ko et al merely discloses phase modulation for encoding positional information and does not further detail the encoding of positional information. Accordingly, Applicants submit that Ko. et al., at Fig. 7 or elsewhere in the patent, does not disclose one-bit of information being represented by a repetition of displacement shapes, as recited by claim 6.

Further, it is respectfully submitted that since amended claim 5 has been shown to be allowable, claims 6-8 dependent on claim 5 are allowable, at least by their dependency on claim 5. Accordingly, Applicants respectfully request reconsideration and withdrawal of the § 102 rejection of claims 6-8.

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Conclusion

Insofar as the Examiner's objections and rejections have been fully addressed, the instant application, including claims 1-8, is in condition for allowance and Notice of Allowability of claims 1-8 is therefore earnestly solicited.

Respectfully submitted,

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